

Notice of Allowability

Application No.

10/606,196

Examiner

Jakieda R. Jackson

Applicant(s)

GOODWIN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to after final amendment filed 11/9/07.
2. ☒ The allowed claim(s) is/are 1, 3-6, 9-53, 56 and 58-63 (now claims 1, 3-4, 6, 9-36, 44-49, 5, 37-43, 50-53, 56 and 58-63, respectively).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Allowance

1. **Claims 1, 3-6, 9-53, 56 and 58-68** are allowed.

The following is a statement of reasons for allowance:

As for independent **claims 1, 58-59 and 63**, they recite a method, system and a program for modifying a transient audio event in an audio signal. Prior art such as Vinton, Crockett and Dowling show a similar method, system and program, but does not specifically teach calculating a spectral flux value for a frame of the audio signal that is currently being analyzed and dividing said spectral flux value for a frame of the audio signal that is currently being analyzed by a normalization factor, to provide a way for transients to be emphasized or de-emphasized, as desired, in a way that will not result in an unpleasant listening experience.

As for independent **claim 5**, it recites a method for modifying a transient audio event in an audio signal. Prior art such as Vinton, Crockett and Dowling show a similar method, but does not specifically teach wherein comparing the STFT result for the second frame with the STFT result for the first frame comprises the square root of the absolute value of the differences in spectral magnitude between the STFT result for the second frame and the STFT result for the first frame, to provide a way for transients to be emphasized or de-emphasized, as desired, in a way that will not result in an unpleasant listening experience.

As for independent **claim 37**, it recites a method for modifying a transient audio event in an audio signal. Prior art such as Vinton, Crockett and Dowling show a similar

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method, but does not specifically teach wherein applying a nonlinear modification to said spectral magnitude of said first portion of the audio signal comprises raising said spectral magnitude to an exponent equal to modification factor, to provide a way for transients to be emphasized or de-emphasized, as desired, in a way that will not result in an unpleasant listening experience.

As for independent **claim 38**, it recites a method for modifying a transient audio event in an audio signal. Prior art such as Vinton, Crockett and Dowling show a similar method, but does not specifically teach wherein applying a nonlinear modification to said spectral magnitude of said first portion of the audio signal comprises adding one to said spectral magnitude of said first portion of the audio signal to obtain a first intermediate result, raising said first intermediate result to an exponent equal to a modification factor to obtain a second intermediate result, and then subtracting one from said second intermediate result to obtain said modified spectral magnitude value, to provide a way for transients to be emphasized or de-emphasized, as desired, in a way that will not result in an unpleasant listening experience.

As for independent **claim 39**, it recites a method for modifying a transient audio event in an audio signal. Prior art such as Vinton, Crockett and Dowling show a similar method, but does not specifically teach modifying said first portion of the audio signal in accordance with the graded response further comprises dividing said modified spectral magnitude value by the corresponding original, unmodified spectral magnitude value to obtain a modification ratio and multiplying a frequency-domain representation of said first portion of said audio signal by said modification ratio to obtain a modified

frequency-domain representation of said first portion of said audio signal whereby the spectral magnitude of said modified frequency-domain representation of said first portion of said audio signal matches said modified spectral magnitude value, to provide a way for transients to be emphasized or de-emphasized, as desired, in a way that will not result in an unpleasant listening experience.

Dependent claims 3-4, 6, 9-36, 40-49, 51-53, 56 and 60-62 are allowed because they further limit their parent claims.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R. Jackson whose telephone number is 571.272.7619. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571.272.7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JRJ
November 19, 2007


RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER